



MERCO CORPORATION - (MERCO)

CAMARILLO • SAN DIEGO • BURBANK • BOSTON • SALT LAKE CITY

John M.T.M.
Ret. to
JWS

Corporate Office
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1415 South Main Street
Salt Lake City, Utah 84115
Phone (801) 484-7621

July 21, 1978

Certified Mail 361824

Department of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Dear Mr. Ronald W. Daniels,

Thank you for your informative letter of June 16, 1978, regarding the Spectrum Quarry.

Attached hereto is our Mining and Reclamation Plan, prepared by our consultant Dr. James Whelan.

Please advise me or instruct me as to what else would be needed.

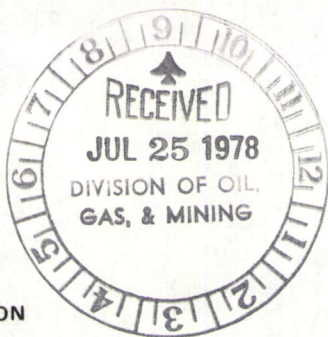
Feel free to stop at our Salt Lake City Office at any time.

Sincerely,

Jerome C. Gatto
Jerome C. Gatto
Executive Vice President

JG/jd

Enclosure
cc: C. Burns



SCOTT M. MATHESON
Governor

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

CLEON B. FEIGHT
Director

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

OIL, GAS, AND MINING BOARD

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June 16, 1978

Mr. Jerome C. Gatto
Executive Vice-President
Merd Corporation
1415 South Main Street
SLC, UT. 84115

Re: Spectrum Quarry
Millard County, Utah

Dear Mr. Gatto:

This is to acknowledge a receipt of a completed Form MR-1 from Merd Corporation.

The filing as you have made it is incomplete and requires more information. Among the things needed for submission to the Division are a completed MR-2 - Mining and Reclamation Plan, a narrative addressing the subsections in Rule M-10 - "Reclamation Standards" and a map showing the particulars of the areas to be mined and reclaimed. Details relative to the construction of the map can be found in Division Rule M-3.

Enclosed are the necessary forms for compliance as well as a copy of Rule M-10. Upon receipt of the above mentioned additional items, the review process for the Spectrum Quarry Mining and Reclamation Plan will begin.

Please contact this office if you have any additional comments.

Sincerely,

Ronald W. Daniels
RONALD W. DANIELS
COORDINATOR OF MINED
LAND DEVELOPMENT

MINING AND RECLAMATION PLAN

for

Spectrum Quarry,

Merd Corporation

Submitted to
Oil, Gas, and Mining Commission
State of Utah
10 July 1978

Prepared by
J. A. Whelan
Registered Professional Engineer,
(Mining Engineering)
State of Utah, Licence 2880

J. A. Whelan
10 July 1978



MINING PLAN FOR SPECTRUM QUARRY
MERD CORPORATION (MERC0)

Introduction

The Spectrum Quarry of the Merd Corporation is located on unsurveyed public lands in what would be sections 23 and 24, T. 17 S., R. 13 W. (SLB&M).? A descriptive location would be Antelope Mountain, House Mountains, Millard County, Utah.

Sec. 14, 22, 23

The quarry will produce decorative and building stone. Although the stone is sold by the square foot, the production rate will be approximately 75 tons per month. A reserve of 6,600,000 tons is indicated and the life of the operation is anticipated at 15 years.

The operation is to be a bench quarry utilizing truck haulage. Because of the nature of the product, excavation will be by a combination of mechanized equipment such as front end loaders and wedging by hand. The product will be transported to U. S. Highway 6 and 50 by existing county gravel roads. Excavation below the valley floor is not anticipated.

In addition to the quarry, a 3,960 foot air strip has been constructed at the site. A 30-foot trailer is on site as an office and for personnel to stay over night. In addition, the camp area provides for parking, a work area for vehicles, and a shop and a stone cutting area.

A geologic report is being prepared and will be made available to the Utah Oil, Gas, and Mining Commission when complete.

Mining Sequence

The basic mining sequence will consist of (1) stripping, (2) quarrying, and (3) reclamation.

Figure 1- Location of Spectrum Mining Claims
from: Utah Highway Map 77/78
Utah State Dept. of Transportation

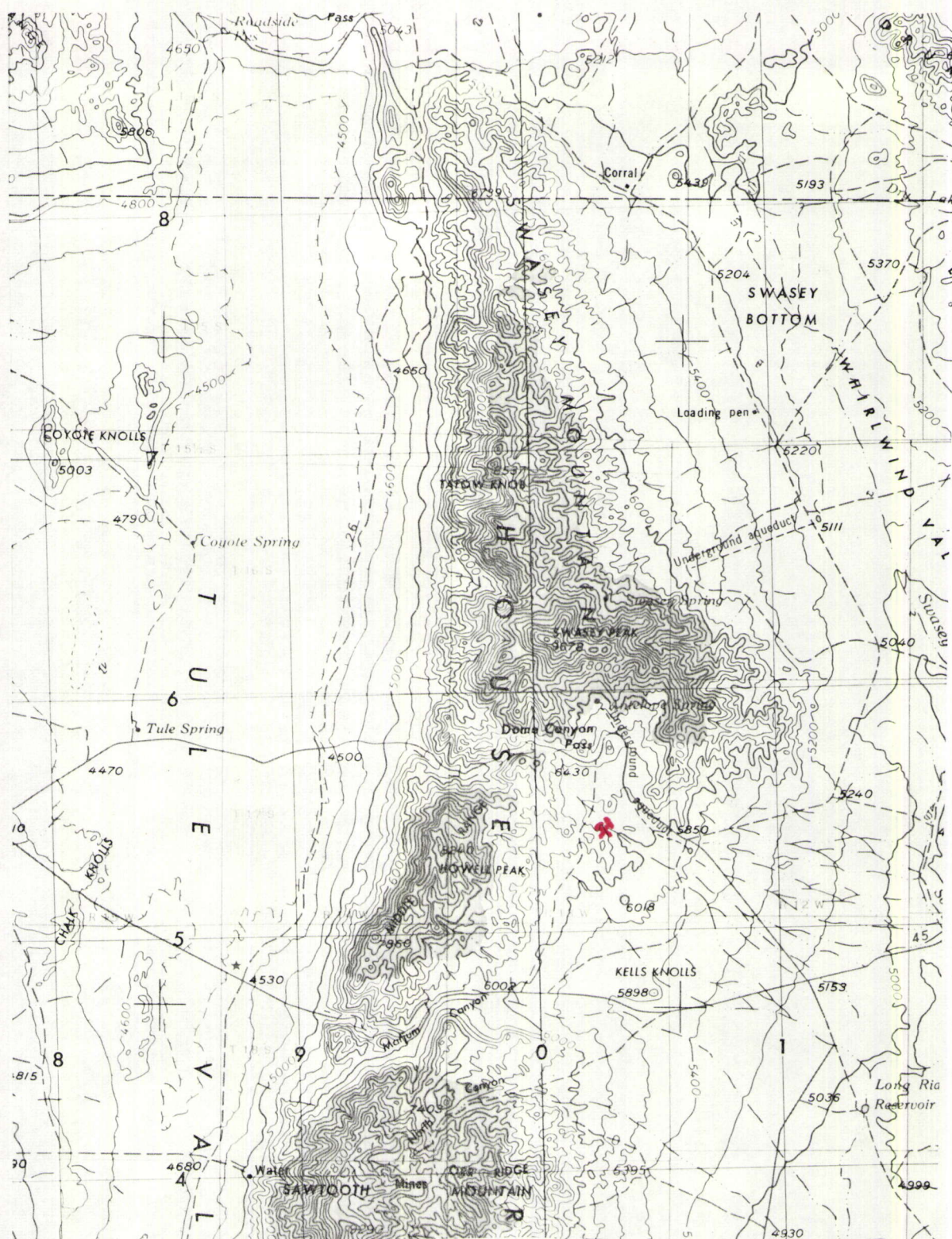


Figure 2- Location of Spectrum Mining Claims
 from: AMS Map Service- Delta Sheet
 scale 1:250,000

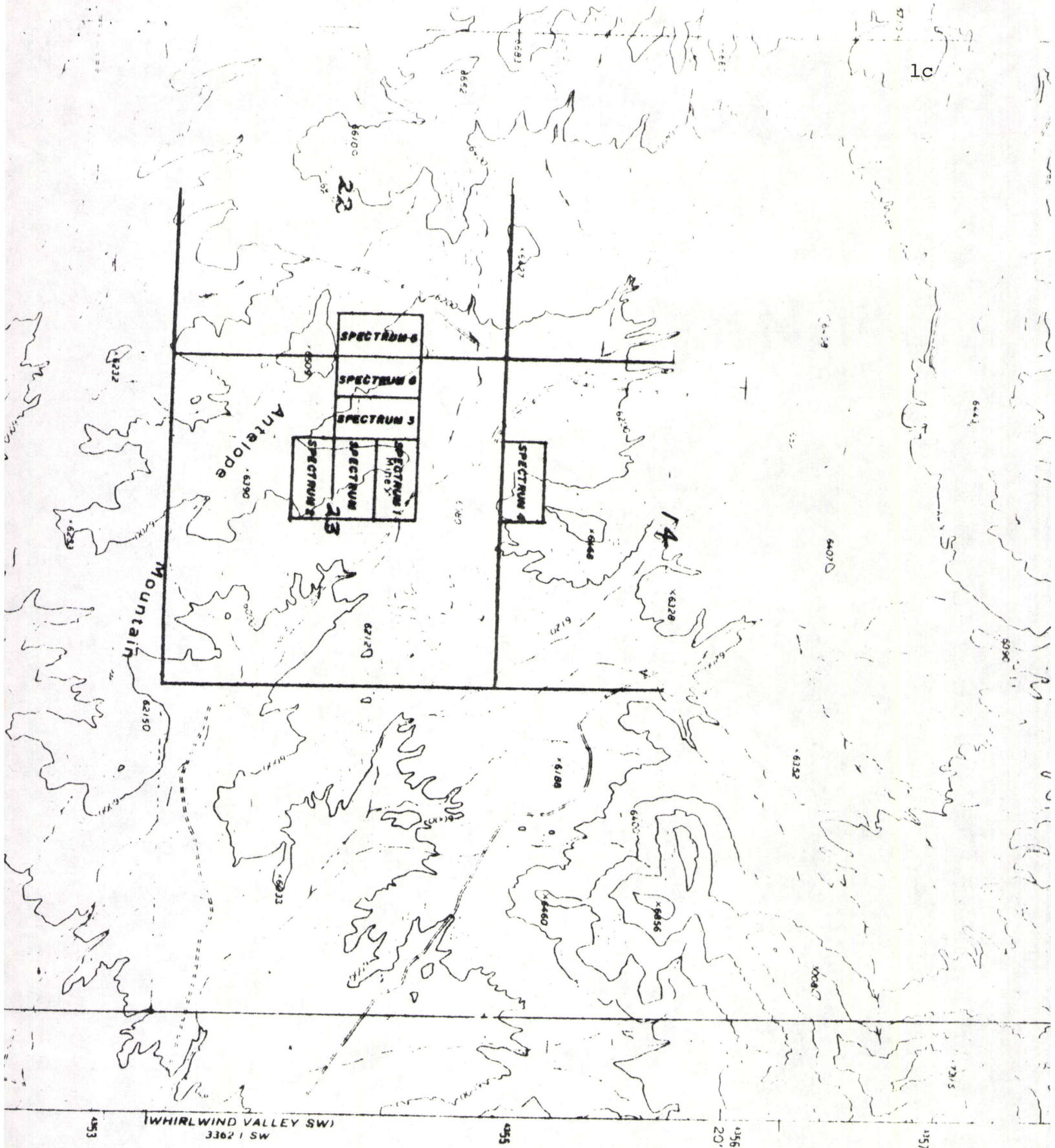


Figure 3 - Location of Spectrum Mining Claims
 From: USGS 7½ minute quad
 Marjum Pass Quadrangle
 scale 1:24,000

Stripping of soil will be done by bulldozer or front end loader. Soil and alluvium will be stockpiled separately. Stripping of rock will be by bulldozer. Rock too hard to rip will be drilled with wagon drills and blasted. Slow powder and light charges will be used to prevent damage to the underlying quarry stone.

Quarrying will be done underhand on benches at about 20 foot intervals. Benches will have a large floor to highwall ratio as it is desired to remove the stone in as large slabs as possible. Bench floors will be washed. Slabs of rock will be removed by pulling "key" blocks and wedging, or sawing.

The benches may be wet at night to facilitate splitting out slabs. Slabs will be loaded onto trucks by hand or front end loaders. Random stone will be sorted and loaded into basket-type pallets by hand. Pallets will be handled by front end loader. Some sawing and trimming of stone will be done on benches and in the camp area.

Access Roads

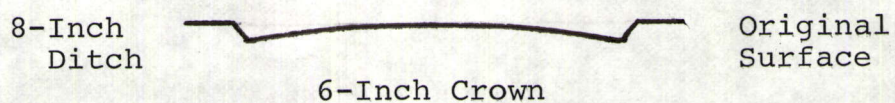
A county road crosses the edge of the main quarry site and access roads will not be required.

No access road will be required for the northern quarry site as the county road borders the site.

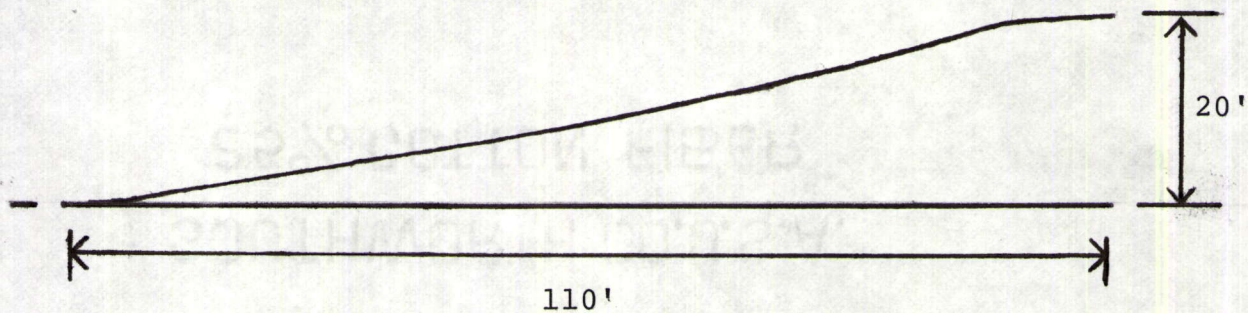
Approximately 110 feet of access road may be built to the southern quarry site, rising about 20 feet. This is not absolutely necessary, as the southern claims are contiguous with the main quarry. However, less surface disturbance will result by constructing the road. The road will be 20 feet wide with a crown of 6 inches and an 8 inch ditch, constructed

MERD CORPORATION
SPECTRUM QUARRY
29 June 1978

PROPOSED ROAD CROSS-SECTION
AND
PROFILE



TYPICAL ROAD CROSS-SECTION
1"=10'



Profile Access Road - South Quarry

1"=20'

with a blade. Drainage will be to the adjacent natural wash where crossed by the county road.

Reclamation

1. The purpose of reclamation will be to:
 1. Restore as much of the area as possible to a condition suitable for winter grazing of sheep.
 2. To maintain drainage in its pre-quarrying condition.
 3. To minimize the visual effects of mining.
2. Clean-up. All trash, scrap metal and wood, scrap equipment, unusable buildings, and extraneous debris

shall be salvaged, buried in a suitable landfill, or disposed of as directed by the Oil, Gas, and Mining Commission of the Division of Natural Resources, State of Utah and in accordance with the Division of Health, State of Utah.

3. Impoundments. All spoil piles, fills, pads and regraded areas will be self-draining and non-impounding.
4. Quarry reclamation. The upper benches of the quarry will be reclaimed by backfilling spoil against them to achieve a natural-appearing slope of 30° or less. Stockpiled alluvial material and soil will be used to support revegetation as described below. If during the three-season check of revegetation, described below, significant erosion of the backfill becomes apparent, the fill will be terraced and drain channels or french drains installed, if necessary. If insufficient fill is available, the low benches will be cleaned to assure stability, and a waiver of backfilling requested from the State of Utah Oil, Gas, and Mining Commission. Waste/spoil material is essentially flaggy, clayey limestone.

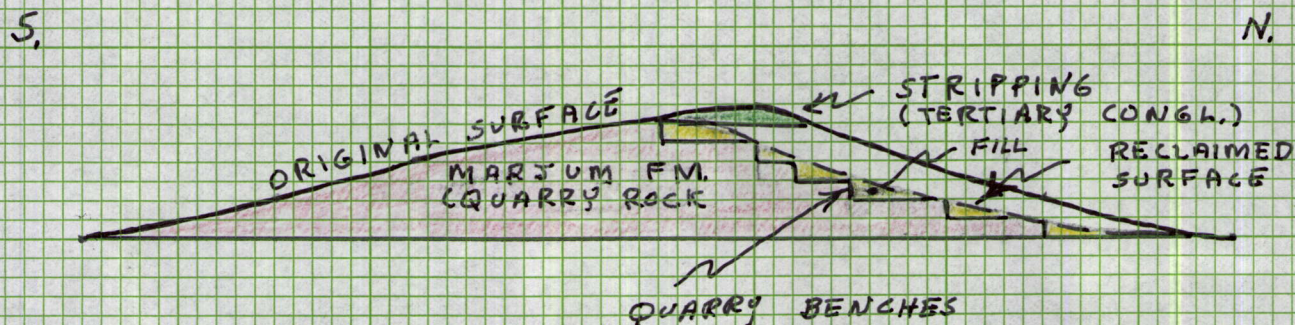
Sulfides are very rare in this rock (one marcasite concretion has been found) and should produce neither acid nor alkali.

Rock material will be moved in with trucks and spread with a bulldozer. If adequate compaction is not obtained, a roller will be used.

Roads and pads will be reclaimed by scarafying to blend into the natural contours and be reseeded with 10 pounds of crested wheat grass and two pounds of bitter brush per acre, sown by broadcast and dragging.

All debris and all structures not required during the reclaiming shall be removed from the site prior to reclaiming operations. Upon completion of reclaiming, remaining structures shall be removed unless approved by the Oil, Gas, and Mining Commission for continuing use.

Surficial materials that are suitable for growth medium upon revegetation will be removed with a front end loader and stockpiled. The first cut containing sage and other brush will be stockpiled separately. During final reclamation, this material will be buried. Care shall be taken to prevent water or wind erosion or excessive compaction of the surficial material to be used in revegetation. Upon completion of grading, this material will be redistributed on areas to be reseeded, in adequate thickness (at least six inches) to support plant growth. Reseeding will be as described for road reclamation, above. Goals of reseeded shall be a twenty percent soil coverage (seventy percent of the original 30 percent coverage). Revegetation will be checked for three growing seasons after reseeded. Test plots, established in consultation with the Oil, Gas, and Mining Commission, will be used to develop revegetation procedures. This plan may be modified on the basis of test plot results.



NOTE: FILL TO BE
COMPACTED WASTE
ROCK, TOPPED WITH
6-INCHES OF ALLUVIAL
MATERIAL FOR REVEGETATION.
IF INSUFFICIENT SPOIL IS
AVAILABLE FOR FILL, SOME
BENCHES WILL BE CUT BACK
TO 30°.

RECLAMATION PLAN
MEAD CORP
SPECTRUM QUARRY
SCALE 1" = 100'
VERTICAL & HORIZONTAL
PREPARED BY J. WHELAN
R.P.E., STATE OF UTAH
LICENSE NO 2880

J. A. Whelan

MINING APPLICATION
NO. ACT 1027/003
Date 7-25-78

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN

(Other forms may be used in lieu of MR 2, provided
they contain the same information)

1. Name of Applicant or Company MERD CORPORATION (MERC0)
2. Proposed type of operation Quarry
3. (a) Prior Land Use(s) winter grazing for sheep; summer grazing for cattle
(b) Current Land Use(s) winter grazing for sheep; summer grazing for cattle
(c) Possible or Prospective Future Land Use(s) winter grazing for sheep
4. What vegetation exists on the land proposed to be affected Artemisia (sage brush),
Astragalus, Aegiots, Zigadenus, Castilleja, Bromus, Sphaeralcea, Shad Scale, etc.
(a) Types and Estimated Percent cover or density: _____
0 to 30 per cent (average 20 per cent)
5. What is the pH range of soil before mining? 7.0 - 9.0 pH average 8.0
Name of Person or Agency and method of determining pH J. A. Whelan,
professor of Geology, University of Utah. Used pH paper. ?
6. Site elevation above sea level 6200 feet
7. In case of coal, oil shale, and bituminous sandstone:
Principal seam(s) and thickness(es) NA
8. Estimated duration of mining operations 15 years
9. Has overburden, waste or rejected materials been classified as acid or
alkali producing? () Yes (xx) No
Does the above material being moved have any other characteristics
affecting revegetation? it is rock
10. Will any underground workings or aquifers be encountered? () Yes (xx) No
Describe _____
Is there an active discharge of water from abandoned deep mines on or
crossing the land affected? () Yes (xxx) No If yes, describe
the quality of water being discharged. _____

11. Describe specifically a detailed procedure for:
- The mining sequence
 - The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades.
 - The procedure for site preparation including removing trees and brush.
 - The method for removing and stockpiling topsoil or disturbed materials.
 - The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic materials.
 - A procedure for final stabilization of disturbed materials.

GRADING AND REGRADING

Specifically describe:

- Typical cross-section of regrading.
- The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
- What type of soil treatment will be utilized.
- The method of drainage control for the final regraded area.
- Maximum grading slope.

See attached mining and reclamation plan.

TESTING

1. Describe method for testing stability of reclamation fill material.

Standard road compaction tests

Describe method for the testing of soil that is intended to support vegetation Test plots utilizing the soil will be planted.

2. Describe any soil treatment employed as an aid to revegetation _____
Soil treatment, if necessary, will be determined from test plots.

3. Describe surface preparation of areas intended to support vegetation:
Scarifying, followed by broadcasting and dragging.

REVEGETATION

1. Revegetation to be completed by:

<input checked="" type="checkbox"/> Operator		<input type="checkbox"/> Hydroseeding
<input type="checkbox"/> Soil Conservation District		<input type="checkbox"/> Aerial Seeding
<input type="checkbox"/> Private Contractor		<input checked="" type="checkbox"/> Conventional or Rangeland Drilling
<input type="checkbox"/> Other (specify) _____	or	<input checked="" type="checkbox"/> Broadcast and Drag
		<input type="checkbox"/> Other _____

2. Will Mulch be used? () Yes (xx) No

Type: _____ Rate/Acre _____ lbs.

3. Revegetation Plan and Schedule -

Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted
crested wheat				
grass	10 lb			15 Sep. - 1 Dec.
bitter brush	2 lb			15 Sep.- 1 Dec.

4. Will affected area be subject to livestock or wildlife grazing?

(xx) Yes () No Will vegetation protection be needed? No

5. Will irrigation be used: () Yes (xx) No Type _____

6. Describe maintenance procedures for revegetation if needed, until surety release is granted.

Reseeding effectiveness will be checked

for three growing seasons.

STATE OF Utah

COUNTY OF Salt Lake

I, Jerome C. Gatto, having been duly sworn
depose and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: Jerome C. Gatto

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 19th day of July, 19 78.

Notary Public: Cecily Dwyer

My Commission Expires: August 26, 1981

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as
follows:

"Information relating to the location, size, or nature
of the deposit and marked confidential by the operator,
shall be protected as confidential information by the
Board and the Division and not be a matter of public
record in the absence of a written release from the
operator, or until the mining operation has been
terminated as provided in subsection (2) of section
40-8-21."

Is confidential information contained herein?

YES X (Initial)

NO (Initial)

Sections desired to be maintained as confidential information -

All Sections.

